

Name:

Date:

Age:

Sex:

Metabolomic Analysis

FATTY ACIDS ANALYSIS IN A GUTHRIE CARD

| Test | Result | Reference value | Percentile |
|------|--------|-----------------|------------|
|------|--------|-----------------|------------|

Polyunsaturated ω3

|                                     |       |        |          |        |
|-------------------------------------|-------|--------|----------|--------|
| α-Linolenic (C18:3 ω3) . . . . .    | 28.00 | μmol/L | 2.4 - 70 | 37.87% |
| Eicosatrienoic (C20:3ω3) . . . . .  | 1.00  | μmol/L | 0 - 200  | 0.50%  |
| Eicosapentanoic (C20:5ω3) . . . . . | 6.14  | μmol/L | 20 - 300 |        |
| Docosahexaenoic (C22:6ω3) . . . . . | 66.00 | μmol/L | 75 - 300 |        |

Polyunsaturated ω6

|                                        |        |        |             |        |
|----------------------------------------|--------|--------|-------------|--------|
| γ-Linolenic (C18:3ω6) . . . . .        | 10.00  | μmol/L | 3 - 58      | 12.73% |
| Linoleic (C18:2ω6) . . . . .           | 852.00 | μmol/L | 1150 - 3200 |        |
| Arachidonic (C20:4ω6) . . . . .        | 120.00 | μmol/L | 245 - 690   |        |
| Dihomo-γ-linolenic (C20:3ω6) . . . . . | 26.00  | μmol/L | 38 - 120    |        |

Monounsaturated-  
Polyunsaturated

|                                        |        |        |            |        |
|----------------------------------------|--------|--------|------------|--------|
| Myristoleic (C14:1) . . . . .          | 2.00   | μmol/L | 0 - 10     | 20.00% |
| Cis-10 pentadecenoic (C15:1) . . . . . | 1.00   | μmol/L | 0 - 38     | 2.63%  |
| Palmitoleic (C16:1ω7) . . . . .        | 35.00  | μmol/L | 14 - 330   | 6.65%  |
| Oleic (C18:1ω9 cis) . . . . .          | 988.00 | μmol/L | 405 - 2000 | 36.55% |
| Cis-11 Eicosenoic (C20:1ω9) . . . . .  | 12.00  | μmol/L | 0 - 26     | 46.15% |
| Erucic (C22:1ω9) . . . . .             | 2.28   | μmol/L | 0 - 16     | 14.25% |
| Nervonic (C24:1ω9) . . . . .           | 45.00  | μmol/L | 40 - 150   | 4.55%  |

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| Saturated                       |         |        |                 |                               |
| Lauric (C12:0) . . . . .        | 1.00    | μmol/L | 1 - 40          | 0.00% <div><div></div></div>  |
| Myristic (C14:0) . . . . .      | 20.00   | μmol/L | 16 - 132        | 3.45% <div><div></div></div>  |
| Pentadecanoic (C15:0) . . . . . | 1.00    | μmol/L | 6 - 32          | <div><div></div></div>        |
| Palmitic (C16:0) . . . . .      | 1563.00 | μmol/L | 1000 - 2600     | 35.19% <div><div></div></div> |
| Heptadecanoic (C17:0) . . . . . | 3.66    | μmol/L | 10 - 42         | <div><div></div></div>        |
| Stearic (C18:0) . . . . .       | 652.00  | μmol/L | 210 - 750       | 81.85% <div><div></div></div> |
| Arachidic (C20:0) . . . . .     | 10.00   | μmol/L | 3.5 - 56.8      | 12.20% <div><div></div></div> |
| Behenic (C22:0) . . . . .       | 11.00   | μmol/L | 7.5 - 76        | 5.11% <div><div></div></div>  |
| Lignoceric (C24:0) . . . . .    | 14.30   | μmol/L | 14.1 - 66       | 0.39% <div><div></div></div>  |

**Laboratory team:****E. Papaconstantinou, Dr A. Mylona, Dr E. Paramera, D. Katakouzinou, K. Doulfi****Name:****Date:****Age:****Sex:**

## Metabolomic Analysis

### FATTY ACIDS ANALYSIS IN A GUTHRIE CARD

| Test                                      | Result         | Reference value | Percentile                                                                                      |
|-------------------------------------------|----------------|-----------------|-------------------------------------------------------------------------------------------------|
| <b>Total-Ratios</b>                       |                |                 |                                                                                                 |
| Total Fatty Acids . . . . .               | 4456.08        | 3000 - 9700     | 21.73%<br>   |
| Total Saturated Fatty Acids . . . . .     | 2261.66        | 728 - 3833      | 49.39%<br>   |
| Total Monounsaturated Fatty Acids . . .   | 1085.28        | 529 - 2219      | 32.92%<br>   |
| Total Polyunsaturated Fatty Acids . . . . | <b>1109.14</b> | 1283 - 3928     |              |
| Total Polyunsaturated ω3 . . . . .        | <b>101.14</b>  | 103 - 774       |            |
| Total Polyunsaturated ω6 . . . . .        | <b>1008.00</b> | 1149 - 3653     |            |
| ω6 / ω3 . . . . .                         | <b>9.97</b>    | 1 - 15          | 64.05%<br> |
| Arachidonic / EPA . . . . .               | <b>19.54</b>   | 0 - 7           |            |
| L/(S+VL) SFA . . . . .                    | <b>48.06</b>   | 0 - 20          |            |

**Notes**

Values above the desired limits are indicated in red.

Values below the desired limits are indicated in blue.

**Lab supervisor**

# Omega-3 & Omega-6 Fatty Acids

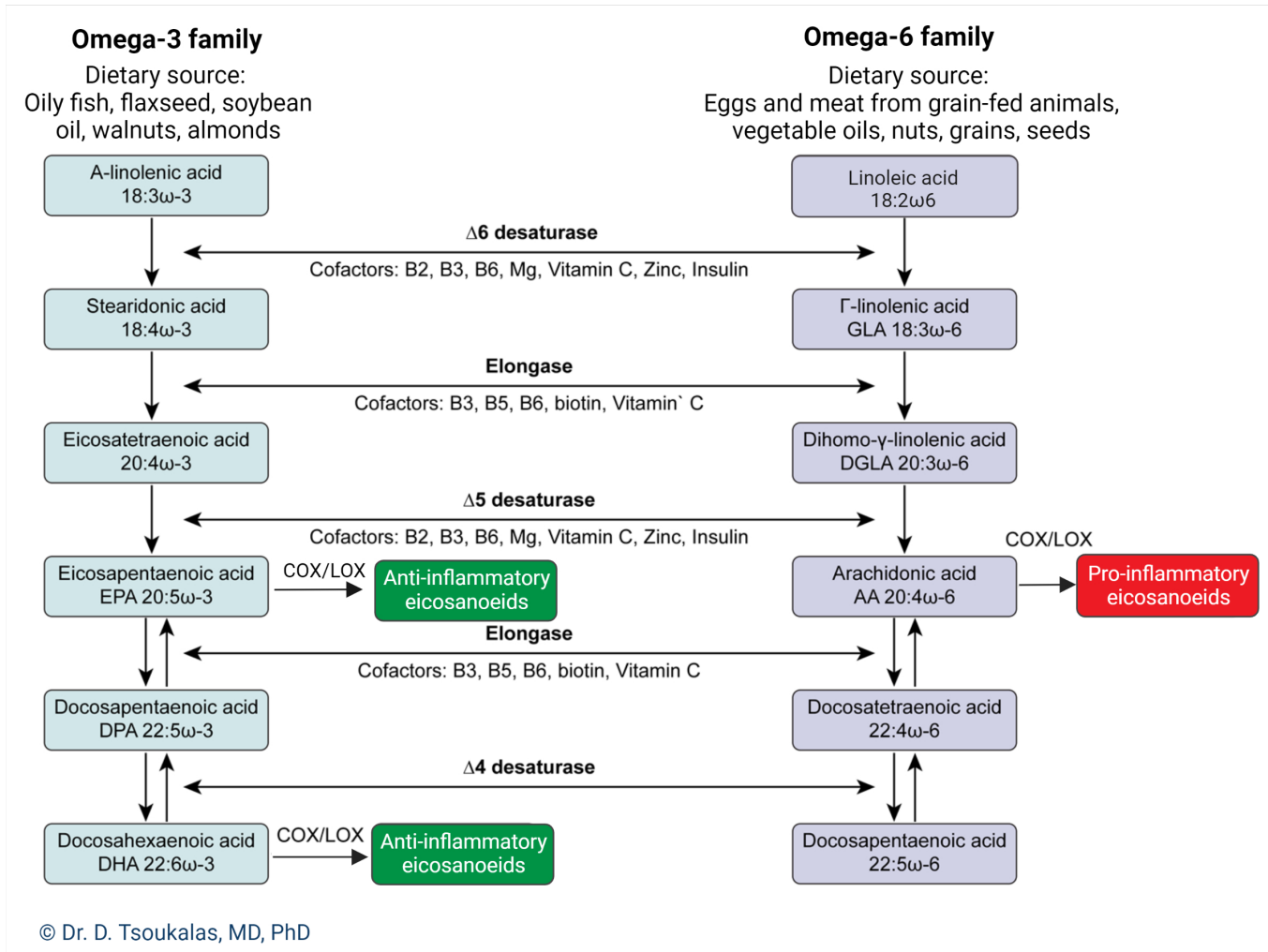


Figure 2: The metabolism of omega-3 and omega-6 fatty acids